ADDENDUM 1

TM-111200, Vol. 1

Remote Monitor Units: 626-RMU-1, -3, -3A, -3H, -3AH
and 626-PA-6036 Remote Monitor Interface Adapter

April 15, 1988

Please remove the following pages from the above technical manual and replace them with the attached pages:

Title page, Notice

1-5, 1-6

2-21, 2-22

2-23, 2-24

MP MASTER

MA23094

WARNING

Because of possible shock or fire hazards, connection of this instrument should be performed in compliance with the National Electric Code (ANSI C1) or any other requirements, or both, which may be applicable to the user.

Installation, operation, and maintenance should only be performed by qualified personnel.

TM-111200

VOLUME 1 -- OPERATING MANUAL

REMOTE MONITOR UNITS: 626-RMU-1, 626-RMU-3, 626-RMU-3A, 626-RMU-3H, 626-RMU-3AH

AND

REMOTE MONITOR INTERFACE ADAPTER: 626-PA-6036

NOTE: Refer to Volume 2 (Service Manual) of TM-111200 for maintenance data.

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(Rev. 15 Dec. 1987)
(Rev. 15 April 1988)

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Table 1-1. Specification Summary (Cont'd)

AC CHANNEL IMPULSE RESPONSE:

Range.....	50-2000 VPK, 1-1000 uS for RMU-1, -3, and -3A 100-4000 VPK, 1-1000 uS for RMU-3H and -3AH
Accuracy.....	±10% reading ±1% F.S., 5-50 uS -6dB @ 1uS & 1mS typ.
Resolution	2 Volts for RMU-1, -3, and -3A 4 Volts for RMU-3H and RMU-3AH

NEUTRAL PEAK MEASUREMENT:

Range.....	5-200 VPK, DC-250 KHz
Accuracy.....	±10% reading ±1% F.S., 0-100 KHz -6dB @ 250 KHz typ.
Resolution.....	1 Volt

DC VOLTAGE INPUT (RMU-3 and -3H only):

Range.....	1.0-25.0 VDC for RMU-3 1.0-99.0 VDC for RMU-3H
Accuracy.....	±3% reading ±0.5% F.S.
Resolution.....	0.1 Volt
Input Impedance....	10 Megohms, 100 pF, each terminal to ground for RMU-3 12 Megohms, 100 pF, each terminal to ground for RMU-3H
Common Mode Voltage	Not to exceed 25 VDC in addition to applied signal for RMU-3 Not to exceed 99 VDC in addition to applied signal for RMU-3H

DC CHANNEL IMPULSE (RMU-3 and -3H only):

Range.....	1.0-25.0 VPK, 1-100 uS for RMU-3 only 1.0-99.0 VPK, 1-1000 uS for RMU-3H
Accuracy.....	±10% reading ±1% F.S., 5-50 uS -6dB @ 1uS, 1mS typ.
Resolution.....	0.1 Volt

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Table 1-1. Specification Summary (Cont'd)

POWER SUPPLY:	
Voltage Range.....	90-130/180-250 VAC, switch selectable
Frequency Range....	47-63 Hz
Power Consumption..	20 Watts max.
Fuse Type.....	3/16 A, 250V, Slow Blow
INTERNAL BATTERIES:	
Battery Type.....	Rechargeable NiCd, not user replaceable
Charge Time.....	2 days from complete discharge to full charge. Internal, constant trickle-charge with unit on.
PHYSICAL:	
Size.....	4"(10 cm) high x 11"(28 cm) wide x 8"(20 cm) deep
Weight.....	6 lb (2.7 kg)
ENVIRONMENTAL:	
Temperature.....	+10 to +40 deg. C operating -40 to +55 deg. C storage
Humidity.....	0 to 95% non-condensing

1.4 APPLICATIONS

The RMU provides an efficient and cost effective means of evaluating power system performance at many sites without the need for highly trained personnel. Once the existence of a power problem has been verified with an RMU, a 626 may be used to provide more detail concerning impulse duration and direction as well as other environmental conditions such as temperature and humidity. Some typical applications for the RMU are:

a. To perform pre-installation site surveys. RMUs can be used to determine the adequacy of existing power lines intended to support critical electrical equipment. Anticipation of power problems saves time, money, and future trouble.

b. To determine the effect of power systems operation on equipment malfunction. The time-referenced disturbance record stored in the instrument permits rapid correlation of errors, outages, and equipment damage in computers, industrial process controls, medical monitoring equipment, and so forth, to power line faults.

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```
!  A LOW       08:58:05   !       ;  Another sag sequence
!                         !       ;
!  A NORMAL    08:58:06   !       ;
!     107V MIN  0.94S     !       ;
!                         !       ;
!  A LOW       09:05:51   !       ;  Another sag
!                         !       ;
!  A NORMAL    09:05:52   !       ;
!     103V MIN  1.07S     !       ;
!                         !       ;
!  D IMP       09:14:43   !       ;  Example of DC impulse event
!     13.2V  PK           !       ;
!                         !       ;
!                         !       ;
! ******************      !       ;
!                         !       ;
!D                        !       ;
!2                        !       ;  Selection 2, CLEAR DATA
!  ARE YOU SURE?          !       ;  User asked for confirmation
!  (1=YES 0=NO)           !       ;
!                         !       ;
!                         !       ;
!    ?                    !       ;  User responds "yes",
!1                        !       ;  data is now cleared.
! D                       !       ;
!0                        !       ;  Return to master menu
```

2.4 CONNECTION OF MONITORED INPUTS

Input connections and disconnections should be made only when the Remote Monitor ON/OFF switch is OFF. For the RMU-1, simply plug the unit's power cord into the outlet to be monitored and turn on the Remote Monitor. Refer to figure 2-1 for three-phase input connections. Note that for a "delta" configuration there is no neutral as such, so the neutral threshold should be set to 205V to avoid unwanted data printouts. Also, be sure to replace the barrier block protective cover before energizing the input signals.

All units will, as mentioned, record a power loss if the power supply voltage falls below either 90 or 180 VAC, depending on the position of the selector switch on the rear panel. The RMU-3, -3H, -3AH and RMU-3A will sample inputs at a 50 Hz rate if the AC on phase A should drop out, ensuring continuous monitoring of impulses, neutral-to-ground, etc.

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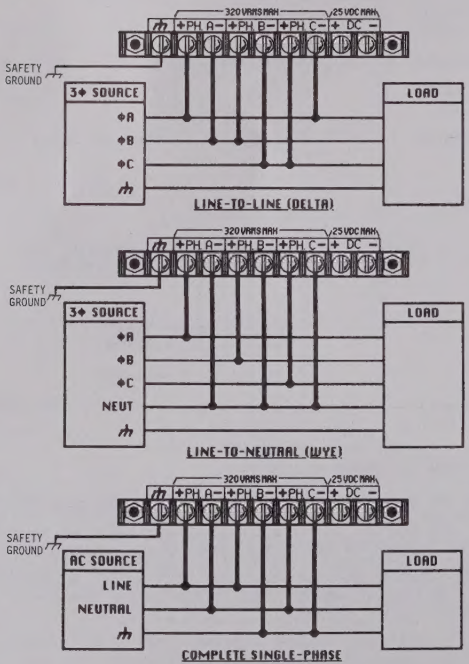

Figure 2-1. 626-RMU-3 and -3H AC Input Connections

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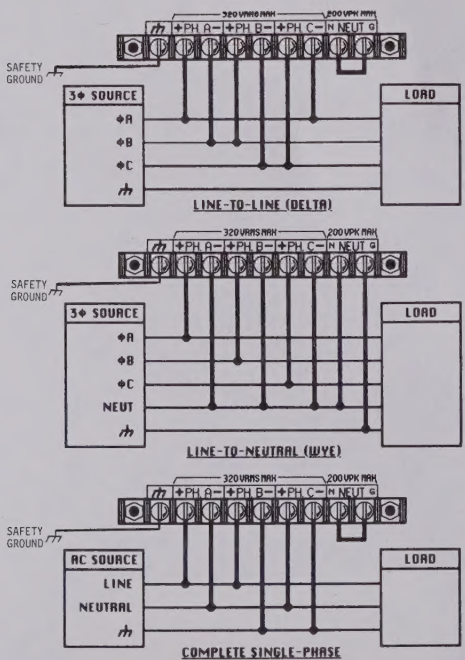

Figure 2-2. 626-RMU-3A and -3AH AC Input Connections

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2.5 INTERNAL BATTERIES

The RMU is equipped with internal batteries to maintain data and keep the time clock running while turned off or during a power loss. As long as the RMU is powered on, the batteries are being trickle-charged. Fully charged batteries will maintain data and time for one month, typically. If the batteries become severely depleted, as evidenced by diagnostic errors (see para. 3.2), the unit should be left on for two days to ensure a full charge.

The batteries are permanently installed in the RMU and cannot be accessed by the user. Replacement may be necessary after 2 to 3 years of operation. If it seems that the batteries are not holding a charge, the unit should be returned to the factory.

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